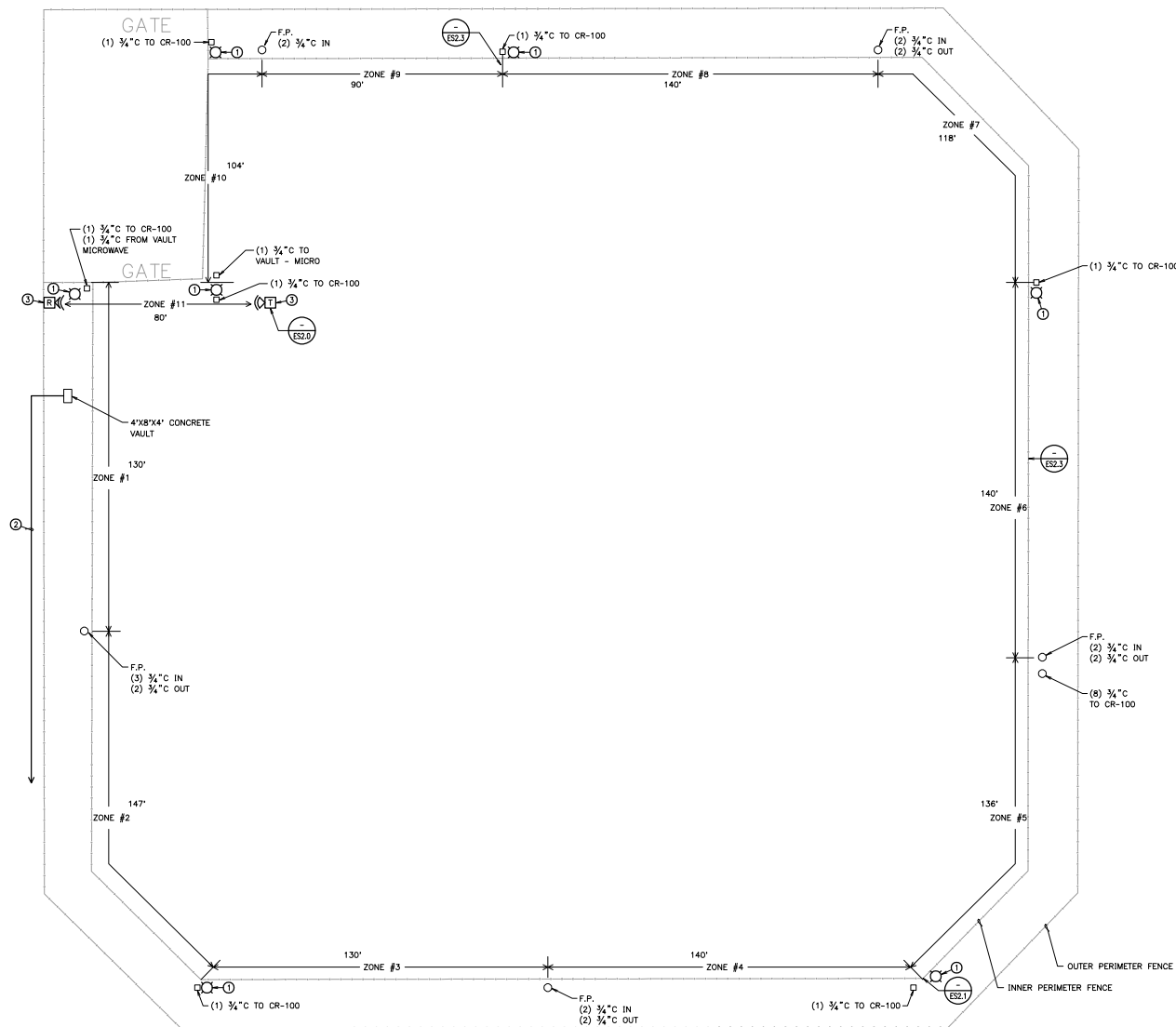


APPENDIX D
IMPROVED PERIMETER SECURITY
MONTANA STATE PRISON
DRAWINGS

IFB07-1382O
Intrusion Detection System
(Security Electronics)



MDIU UNIT FENCE PLAN

SCALE: 1" = 20'-0"

WEP:



NOTES:

1. INNER PERIMETER FENCE SHALL BE PROVIDED WITH A DUAL DOMAIN ALARM SYSTEM. A CABLE ALARM DETECTION SYSTEM AND TAUT WIRE DETECTION SYSTEM INSTALLED ON THE FENCE WITH ONE MICROWAVE SENSOR SYSTEM AT THE VEHICLE FENCE ENCLOSURE.
2. THE CR-100 IS A SYSTEM RELAY CARD.
3. ALL INNER FENCE PERIMETER CONDUITS SHOWN ON THIS DRAWING ARE EXISTING.
4. GROUND FENCE EVERY 100' WITH 12" GROUND ROD AND #4 COPPER WIRE. GROUND FIELD PROCESSOR PER MANUFACTURES REQUIREMENTS.
5. PROVIDE A 5 KVA UPS AND FENCE ALARM SYSTEM POWER SUPPLY FROM EXISTING ELECTRICAL ROOM IN THE MDIU UNIT BUILDING. ROUTE 1-1" CONDUIT TO THE IN-GROUND VAULT FROM THE MDIU UNIT ELECTRICAL ROOM.
6. INSTALL THE 4 STRAND TAUT WIRE OUTRIGGERS AT 8' ABOVE GRADE AT ALL LOCATIONS.

KEY NOTES:

- ① END OF ZONE SIGNAL LIGHT MOUNTED BETWEEN THE FENCES ADJACENT TO THE INSIDE FENCE.
- ② (2) EXISTING 3/4" CONDUITS ROUTED BETWEEN ZONES #13 AND #14 OF THE EXISTING FACILITY FENCE ALARM SYSTEM. ROUTE CABLE IN EXISTING CONDUITS AND CONNECT TO SYSTEM CR-100 RELAY CARDS.
- ③ ROUTE 1-3/4" CONDUIT FROM EACH MICROWAVE UNIT TO THE MICROWAVE VAULT AT THE END OF ZONE #10.

SYMBOL LEGEND

- MICROWAVE RECEIVER
- MICROWAVE TRANSMITTER
- END OF ZONE SIGNAL LIGHT

NOTE:

THE INSTALLER SHALL PROVIDE ALL MATERIALS AND EQUIPMENT THAT IS NOT PROVIDED BY THE MANUFACTURERS.

ARCHITECTS A.I.A.
JOHN W. PETERSON
MICHAEL A. BESSONSON
FRANKLIN J. HARRIS
GLEN D. ANKOKER

Architects
Design Group PC

No. 1 SUNSET PLAZA • KAUSPELL, MONTANA • 406-257-7125

IMPROVE PERIMETER SECURITY
MONTANA STATE PRISON
A/B 25-12-02
DEER LODGE, MONTANA

PERIMETER
FENCE PLAN

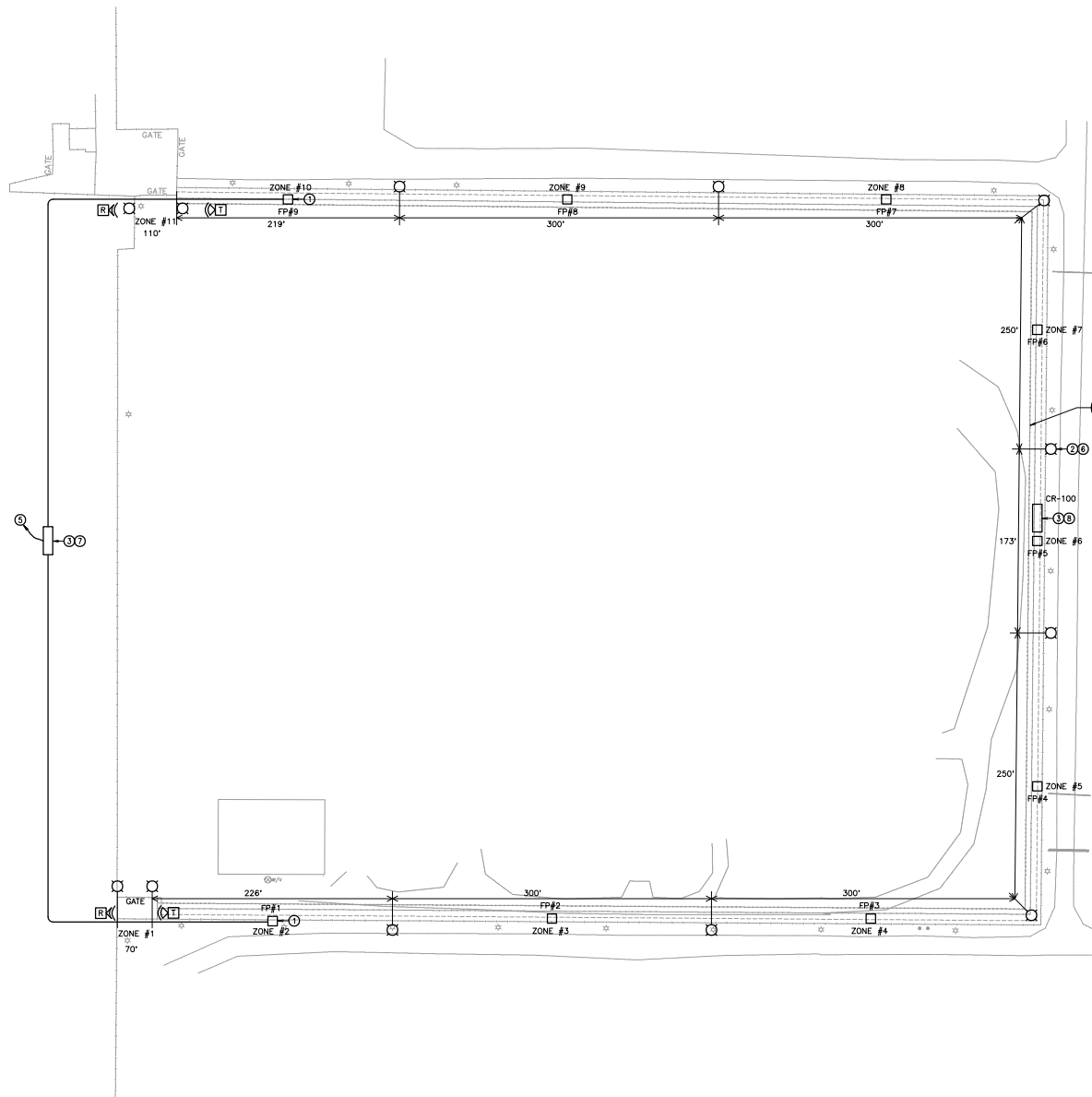
DATE:
10.18.06

JOB NO:
ADG 05-561

SHEET NO:

ES1.0

MW Consulting Engineers
Suite 222 West Street, Suite 200, Spokane WA 99201
Tel: 509.335.5000 Fax: 509.335.1700



INDUSTRIES FENCE PLAN

SCALE: 1" = 50'-0"

WEST



NOTES:

1. INNER PERIMETER FENCE SHALL BE PROVIDED WITH A DUAL DOMAIN ALARM SYSTEM, A CABLE ALARM DETECTION SYSTEM AND TAUT WIRE DETECTION SYSTEM INSTALLED ON THE FENCE WITH TWO MICROWAVE SENSOR SYSTEMS AT THE MAN GATES WHERE SHOWN ON THE DRAWINGS.
2. GROUND FENCE EVERY 100' WITH A 12" GROUND ROD AND #4 COPPER WIRE. GROUND THE FIELD PROCESSOR UNITS AT EACH PROCESSOR LOCATION PER MANUFACTURERS REQUIREMENTS.
3. FP = FIELD PROCESSOR.
4. PROVIDE A 5 KVA UPS AND FENCE ALARM SYSTEM POWER SUPPLIES FROM ALARM SYSTEM HEAD END EQUIPMENT ROOM TO THE IN-GROUND PULL BOX LOCATIONS.
5. INSTALL THE 4 STRAND TAUT WIRE OUTRIGGERS AT 8' ABOVE GRADE AT ALL LOCATIONS.
6. OWNER TO PROVIDE ALL CONDUIT AND EQUIPMENT INSTALLATION TO INCLUDE ALL CONNECTIONS. MANUFACTURERS TO PROVIDE ALL EQUIPMENT REQUIRED FOR THEIR SPECIFIC SYSTEMS, ALL ALL TECHNICAL ASSISTANCE, SUPERVISION, AND SYSTEM TESTING.

KEY NOTES:

- ① ROUTE (2) 3/4" CONDUITS BETWEEN THE INNER AND OUTER PERIMETER FENCES. STUB UP EACH CONDUIT RUN AT EACH FIELD PROCESSOR UNIT THEN CONTINUE ON TO THE NEXT FIELD PROCESSOR UNIT.
- ② PROVIDE A SCHEDULE 40 5' HIGH PIPE AT THE END OF EACH FENCE SENSOR ZONE AND MOUNT END OF ZONE STROBE LIGHT ON THE PIPE.
- ③ PROVIDE AN IN-GROUND PULL BOX EQUAL TO UTILITY VAULT COMPANY MODEL #3030-1A. ROUTE ALL PERIMETER CONDUITS TO THE IN-GROUND PULL BOX LOCATIONS AS INDICATED.
- ④ ROUTE MICROWAVE CONDUITS FROM EACH MICROWAVE UNIT TO EACH RESPECTIVE IN-GROUND PULL BOX.
- ⑤ PROVIDE (2) 3/4" CONDUITS TO TIE INTO SYSTEM.
- ⑥ END OF ZONE SIGNAL LIGHT MOUNTED BETWEEN THE FENCES ADJACENT TO THE INSIDE FENCE. TYPICAL ALL LOCATIONS.
- ⑦ ROUTE (2) 3/4" CONDUITS TO FP#9 AND (2) 3/4" CONDUITS TO FP#1. EACH CONDUIT RUN IS APPROXIMATELY 540' LONG.
- ⑧ ROUTE (1) 3/4" CONDUIT FROM EACH STROBE LIGHT TO THIS LOCATION. A TOTAL OF (6) CONDUITS FROM THE STROBE TO THE NORTH END OF THE SITE AND (6) CONDUITS FROM THE STROBE FROM THE SOUTH END OF THE SITE.

FENCE TYPE LEGEND

- EXISTING FENCE TO REMAIN
- EXISTING 5' HIGH BARRIER FENCE TO BE REMOVED BY OWNER.
- NEW 16' HIGH FENCE W/ DETECTION SYSTEM
- NEW 5' HIGH BARRIER FENCE TO BE INSTALLED BY OWNER.

1. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. ACTUAL DIMENSIONS ARE REQUIRED TO BE FIELD VERIFIED BY THE CONTRACTOR.

ARCHITECTS A.I.A.
JOHN W. PETERSON
MICHAEL A. BESSONSON
FRANKLIN S. GLEN
GLENN D. ANKORER

**Architects
Design
Group PC**

No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406-257-7125

**IMPROVE PERIMETER SECURITY
MONTANA STATE PRISON**

A/B 25-12-02
DEER LODGE, MONTANA

INDUSTRIES
FENCING PLAN

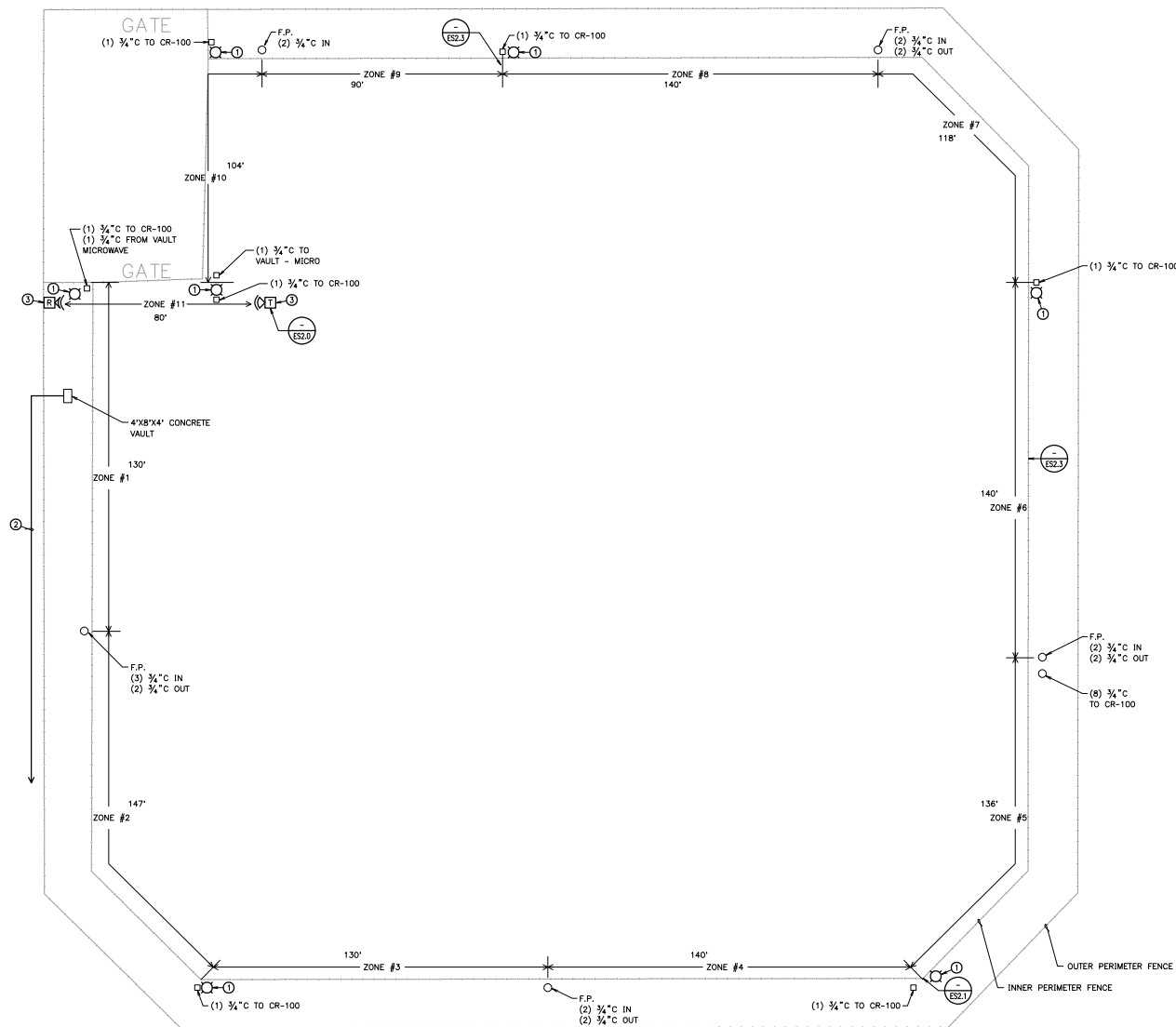
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10.18.06

JOB NO:
ADG 05-561

SHEET NO:

ES1.1





MDIU UNIT FENCE PLAN

SCALE: 1" = 20'-0"

WEP:



NOTES:

1. INNER PERIMETER FENCE SHALL BE PROVIDED WITH A DUAL DOMAIN ALARM SYSTEM. A CABLE ALARM DETECTION SYSTEM AND TAUT WIRE DETECTION SYSTEM INSTALLED ON THE FENCE WITH ONE MICROWAVE SENSOR SYSTEM AT THE VEHICLE FENCE ENCLOSURE.
2. THE CR-100 IS A SYSTEM RELAY CARD.
3. ALL INNER FENCE PERIMETER CONDUITS SHOWN ON THIS DRAWING ARE EXISTING.
4. GROUND FENCE EVERY 100' WITH 12" GROUND ROD AND #4 COPPER WIRE. GROUND FIELD PROCESSOR PER MANUFACTURES REQUIREMENTS.
5. PROVIDE A 5 KVA UPS AND FENCE ALARM SYSTEM POWER SUPPLY FROM EXISTING ELECTRICAL ROOM IN THE MDIU UNIT BUILDING. ROUTE 1-1" CONDUIT TO THE IN-GROUND VAULT FROM THE MDIU UNIT ELECTRICAL ROOM.
6. INSTALL THE 4 STRAND TAUT WIRE OUTRIGGERS AT 8' ABOVE GRADE AT ALL LOCATIONS.

KEY NOTES:

- ① END OF ZONE SIGNAL LIGHT MOUNTED BETWEEN THE FENCES ADJACENT TO THE INSIDE FENCE.
- ② (2) EXISTING 3/4" CONDUITS ROUTED BETWEEN ZONES #13 AND #14 OF THE EXISTING FACILITY FENCE ALARM SYSTEM. ROUTE CABLE IN EXISTING CONDUITS AND CONNECT TO SYSTEM CR-100 RELAY CARDS.
- ③ ROUTE 1-3/4" CONDUIT FROM EACH MICROWAVE UNIT TO THE MICROWAVE VAULT AT THE END OF ZONE #10.

SYMBOL LEGEND

- MICROWAVE RECEIVER
- MICROWAVE TRANSMITTER
- END OF ZONE SIGNAL LIGHT

NOTE:

THE INSTALLER SHALL PROVIDE ALL MATERIALS AND EQUIPMENT THAT IS NOT PROVIDED BY THE MANUFACTURERS.

ARCHITECTS A.I.A.
JOHN W. PETERSON
MICHAEL A. PETERSON
FRANKLIN D. PETERSON
GLEN D. ANKOR

Architects
Design Group PC

No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406-257-7125

IMPROVE PERIMETER SECURITY
MONTANA STATE PRISON
A/B 25-12-02
DEER LODGE, MONTANA

PERIMETER
FENCE PLAN

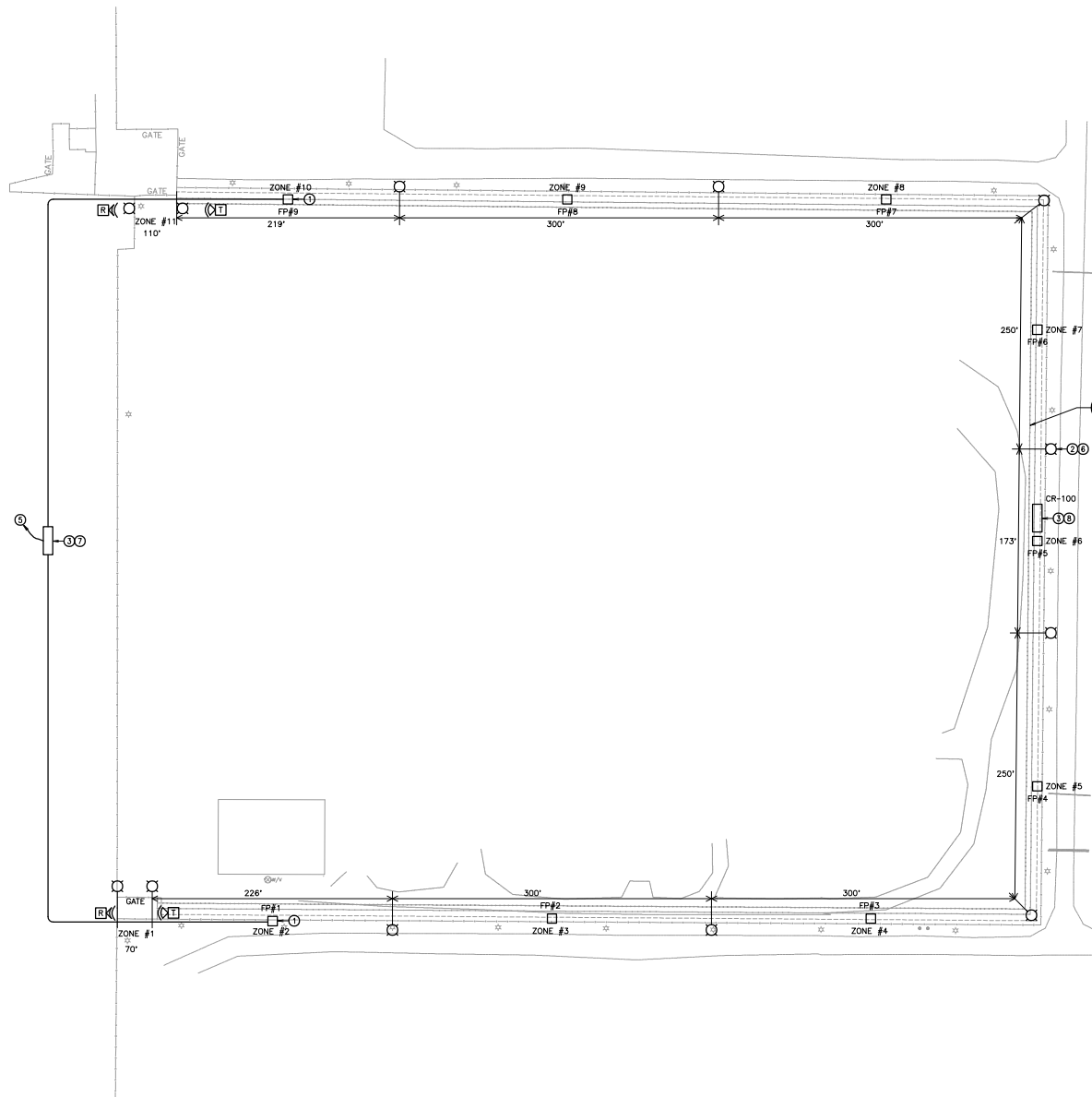
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JOB NO:
ADG 05-561

SHEET NO:

ES1.0

MW Consulting Engineers
2022 West Street, Suite 200, Spokane, WA 99201
Tel: 509.325.5000 Fax: 509.325.1123



INDUSTRIES FENCE PLAN

SCALE: 1" = 50'-0"

WEST



NOTES:

1. INNER PERIMETER FENCE SHALL BE PROVIDED WITH A DUAL DOMAIN ALARM SYSTEM, A CABLE ALARM DETECTION SYSTEM AND TAUT WIRE DETECTION SYSTEM INSTALLED ON THE FENCE WITH TWO MICROWAVE SENSOR SYSTEMS AT THE MAN GATES WHERE SHOWN ON THE DRAWINGS.
2. GROUND FENCE EVERY 100' WITH A 12" GROUND ROD AND #4 COPPER WIRE. GROUND THE FIELD PROCESSOR UNITS AT EACH PROCESSOR LOCATION PER MANUFACTURERS REQUIREMENTS.
3. FP = FIELD PROCESSOR.
4. PROVIDE A 5 KVA UPS AND FENCE ALARM SYSTEM POWER SUPPLIES FROM ALARM SYSTEM HEAD END EQUIPMENT ROOM TO THE IN-GROUND PULL BOX LOCATIONS.
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6. OWNER TO PROVIDE ALL CONDUIT AND EQUIPMENT INSTALLATION TO INCLUDE ALL CONNECTIONS. MANUFACTURERS TO PROVIDE ALL EQUIPMENT REQUIRED FOR THEIR SPECIFIC SYSTEMS, ALL ALL TECHNICAL ASSISTANCE, SUPERVISION, AND SYSTEM TESTING.

KEY NOTES:

- ① ROUTE (2) 3/4" CONDUITS BETWEEN THE INNER AND OUTER PERIMETER FENCES. STUB UP EACH CONDUIT RUN AT EACH FIELD PROCESSOR UNIT THEN CONTINUE ON TO THE NEXT FIELD PROCESSOR UNIT.
- ② PROVIDE A SCHEDULE 40 5' HIGH PIPE AT THE END OF EACH FENCE SENSOR ZONE AND MOUNT END OF ZONE STROBE LIGHT ON THE PIPE.
- ③ PROVIDE AN IN-GROUND PULL BOX EQUAL TO UTILITY VAULT COMPANY MODEL #3030-1A. ROUTE ALL PERIMETER CONDUITS TO THE IN-GROUND PULL BOX LOCATIONS AS INDICATED.
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- ⑤ PROVIDE (2) 3/4" CONDUITS TO TIE INTO SYSTEM.
- ⑥ END OF ZONE SIGNAL LIGHT MOUNTED BETWEEN THE FENCES ADJACENT TO THE INSIDE FENCE. TYPICAL ALL LOCATIONS.
- ⑦ ROUTE (2) 3/4" CONDUITS TO FP#9 AND (2) 3/4" CONDUITS TO FP#1. EACH CONDUIT RUN IS APPROXIMATELY 540' LONG.
- ⑧ ROUTE (1) 3/4" CONDUIT FROM EACH STROBE LIGHT TO THIS LOCATION. A TOTAL OF (6) CONDUITS FROM THE STROBE TO THE NORTH END OF THE SITE AND (6) CONDUITS FROM THE STROBE FROM THE SOUTH END OF THE SITE.

FENCE TYPE LEGEND

- EXISTING FENCE TO REMAIN
- EXISTING 5' HIGH BARRIER FENCE TO BE REMOVED BY OWNER.
- NEW 1/2' HIGH FENCE W/ DETECTION SYSTEM
- NEW 5' HIGH BARRIER FENCE TO BE INSTALLED BY OWNER.

1. DIMENSIONS SHOWN ARE APPROXIMATE AND ARE FOR GENERAL INFORMATION ONLY. ACTUAL DIMENSIONS ARE REQUIRED TO BE FIELD VERIFIED BY THE CONTRACTOR.



MW Consulting Engineers
 2000 222 West Street, Suite 200, Spokane, WA 99201
 Tel: 509.325.0000 Fax: 509.325.0001

ARCHITECTS A.I.A.
 JOHN W. PETERSON
 MICHAEL A. BESSONSON
 FRANKLIN D. GLEN
 GLEN D. ANKORER
**Architects
 Design
 Group PC**
 No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406.257.7125

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 MONTANA STATE PRISON**
 A/B 25-12-02
 DEER LODGE, MONTANA

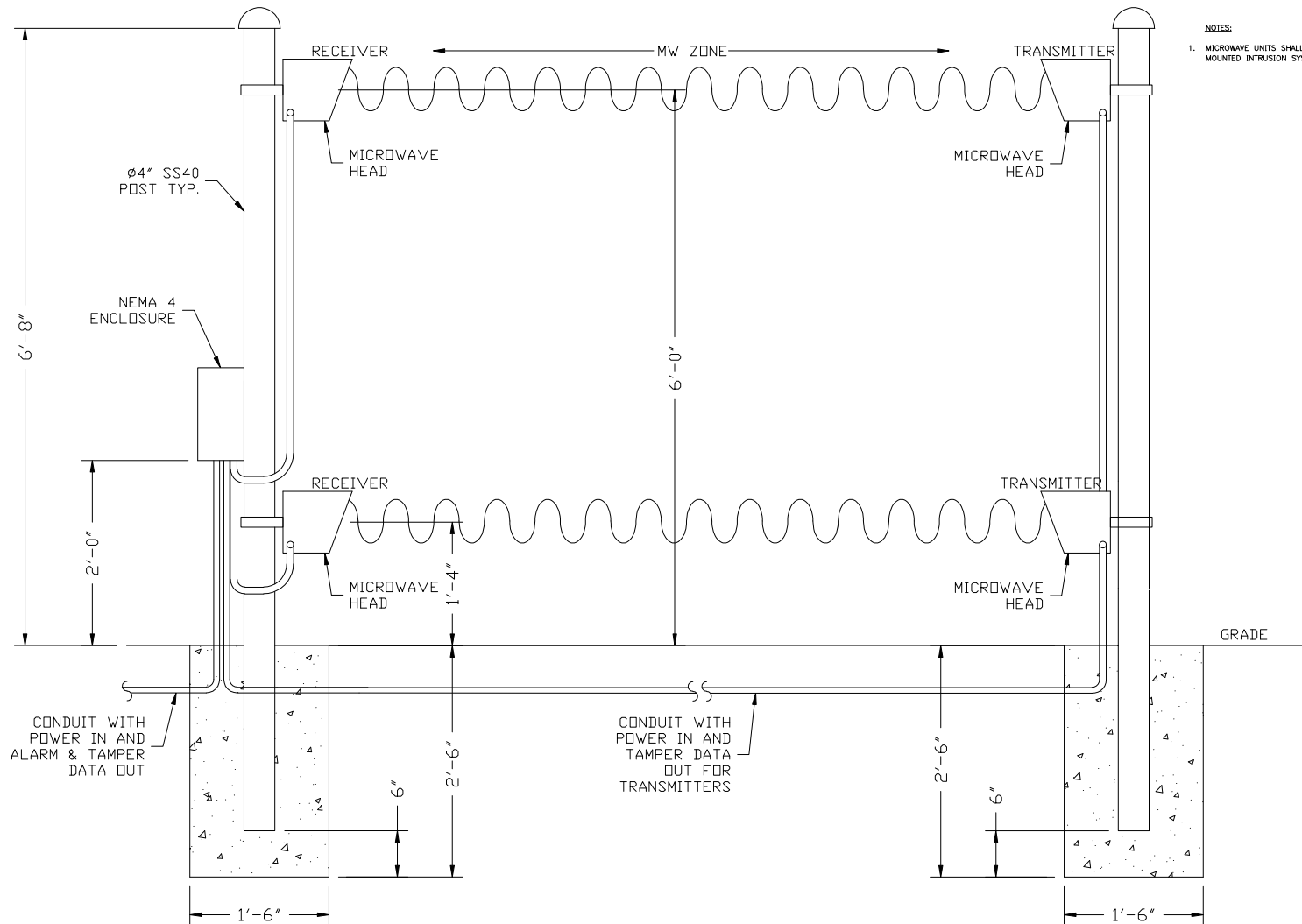
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 FENCING PLAN

DATE:
10.18.06

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ADG 05-561

SHEET NO:

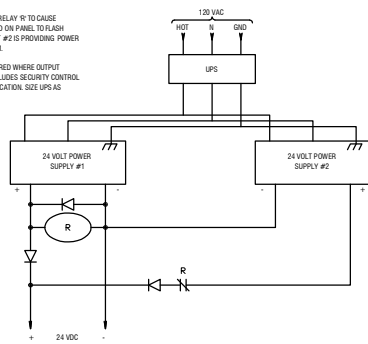
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NOTES:
1. MICROWAVE UNITS SHALL BE FURNISHED BY THE FENCE MOUNTED INTRUSION SYSTEM (FPS).

STACKED MICROWAVE DETAIL

NOTE:
CONNECT RELAY R TO CAUSE
POWER LED ON PANEL TO FLASH
WHEN UNIT #2 IS PROVIDING POWER
TO SYSTEM
UPS REQUIRED WHERE OUTPUT
USAGE INCLUDES SECURITY CONTROL,
PANEL INDICATION, SIZE UPS AS
REQUIRED.

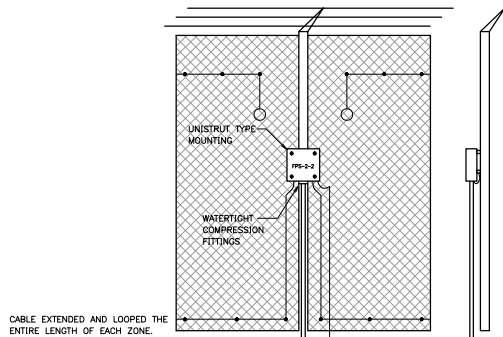


TYPICAL 24 VDC POWER SUPPLY SYSTEM

NOT TO SCALE

WSP

7



SIGNAL WIRING IN CONDUIT TO
CONTROL POINT. NOTE: SIGNAL
CONDUIT CAN OFTEN BE INSTALLED
ON THE FENCE.

INSTALL GROUND ROD
PER NATIONAL ELECTRICAL CODE

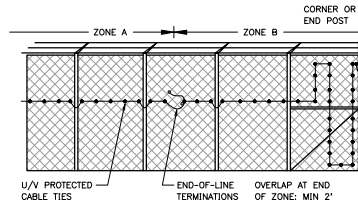
SENSOR CABLE MOUNTING
SHOWN. FOR HELISENSOR
MOUNTING REFER TO
APPROPRIATE FIGURES.

**TYPICAL CONFIGURATION FOR 16' TALL
FENCE MOUNTED PROCESSOR**

NOT TO SCALE

WSP

8

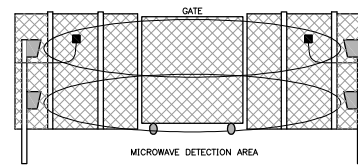


ZONE OVERLAP

NOT TO SCALE

WSP

4



NOTE:
FPS IS STOPPED 1-2 PANELS FROM
GATE TO ELIMINATE NUISANCE ALARMS
WHEN GATE MOVES.

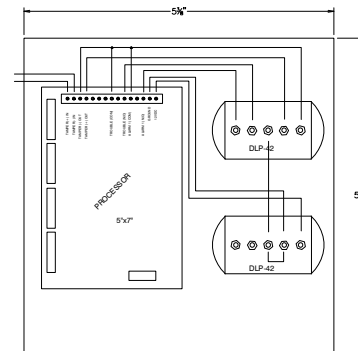
MICROWAVE OVERLAP PROTECTS
THE AREA WHERE FPS DOES
NOT SENSE.

MPS MICROWAVE SYSTEM

NOT TO SCALE

WSP

5

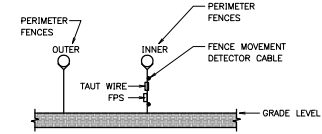


COMPONENT PLACEMENT - TAUT WIRE

NOT TO SCALE

WSP

6

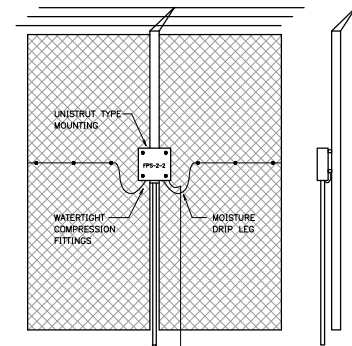


TYPICAL PROCESSOR INSTALLATION

NOT TO SCALE

WSP

1



SIGNAL WIRING IN CONDUIT TO
CONTROL POINT. NOTE: SIGNAL
CONDUIT CAN OFTEN BE INSTALLED
ON THE FENCE.

INSTALL GROUND ROD
PER NATIONAL ELECTRICAL CODE

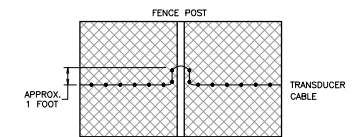
SENSOR CABLE MOUNTING
SHOWN. FOR HELISENSOR
MOUNTING REFER TO
APPROPRIATE FIGURES.

**TYPICAL CONFIGURATION FOR 12' TALL
FENCE MOUNTED PROCESSOR**

NOT TO SCALE

WSP

2



TRANSDUCER CABLE SERVICE LOOP

NOT TO SCALE

WSP

3

ARCHITECTS A/LA
JOHN W. PETERSON
MICHAEL A. ASSALONSON
FRANK J. SUTHERLAND
GLENN D. ANCKER
Architects
Design
Group PC
No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406-257-7125

IMPROVE PERIMETER SECURITY
MONTANA STATE PRISON
A/E 25-12-02
DEER LODGE MONTANA

DETAILS - SECURITY

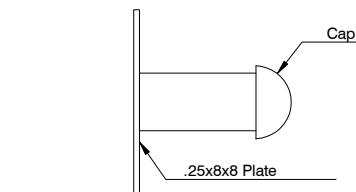
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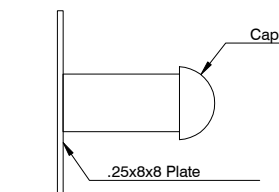
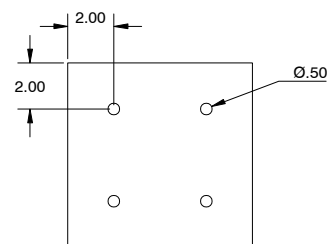
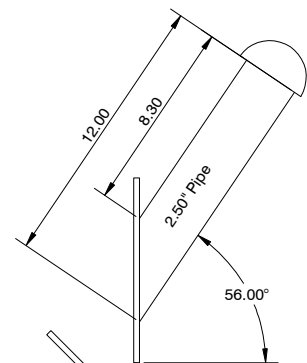
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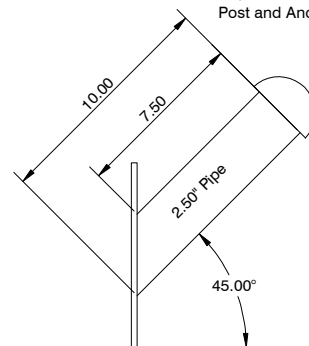
MW Consulting Engineers
North 222 West Street, Suite 200, Spokane WA 99201
Tel: 509-325-8800 Fax: 509-325-7123



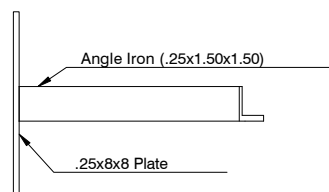
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Anchor Post



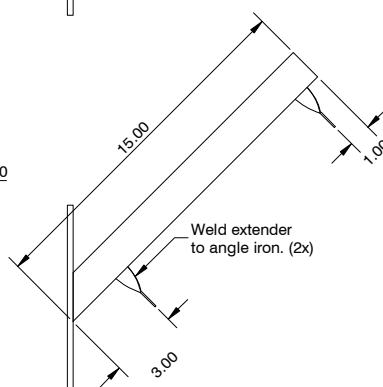
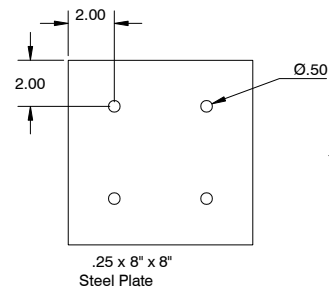
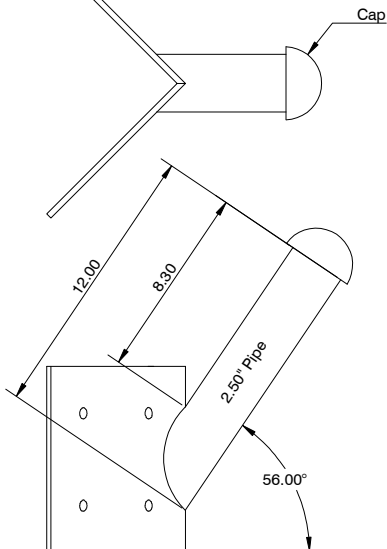
Wall Mounted: Sensor
Post and Anchor Post



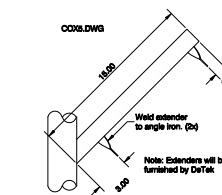
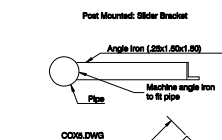
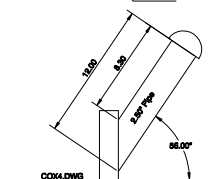
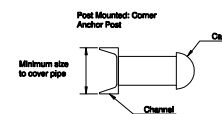
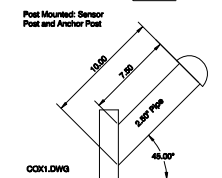
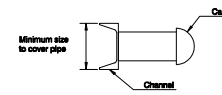
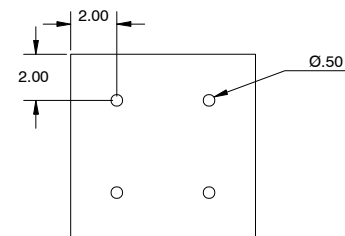
Wall Mounted: Slider Bracket



Wall Mounted: Corner
Anchor Post



Note: Extenders will be
furnished by DeTek



MW Consulting Engineers
North 222 West Street, Suite 200, Tukwila WA 98063
Tel: 206.455.4500 Fax: 206.455.1123

ARCHITECTS A.I.A.
JOHN W. PETERSON
MICHAEL A. ABRAHAMSON
FRANK JOHN STEFANO
GLEN D. ANCHER
Architects
Design Group PC
No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406.257.7125

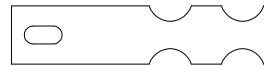
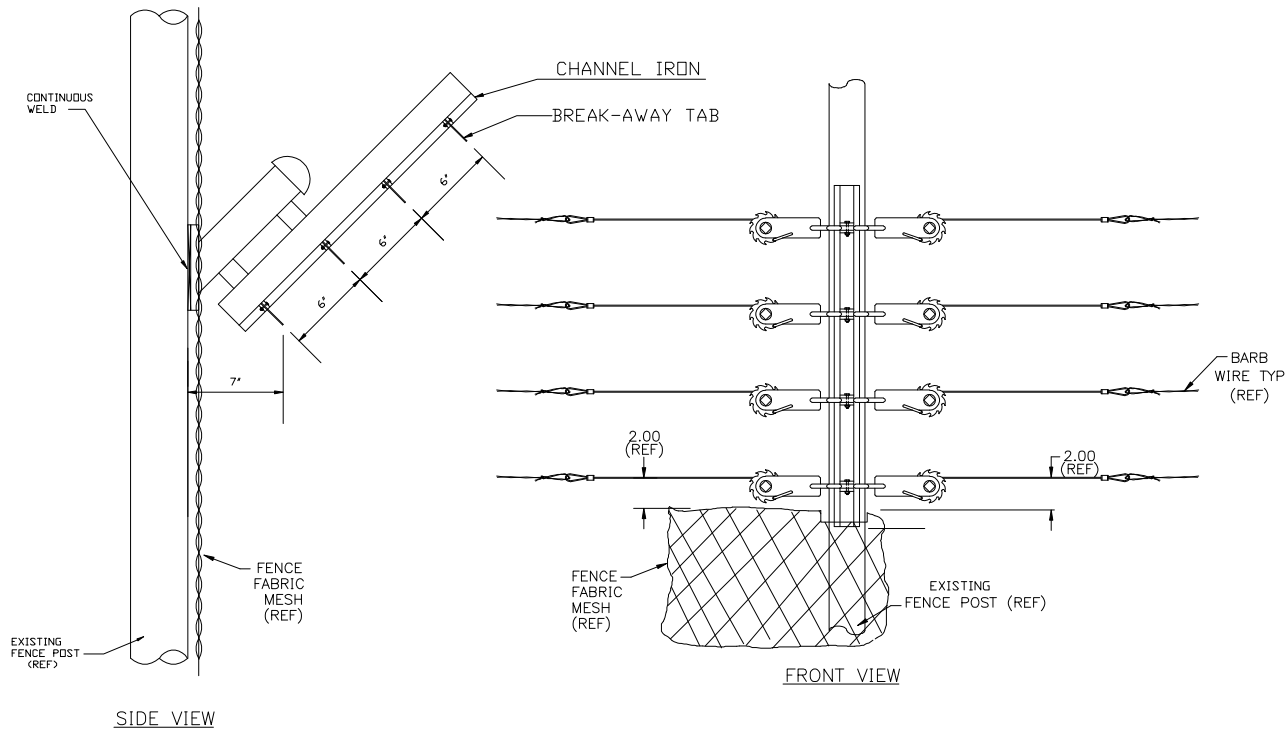
IMPROVE PERIMETER SECURITY
MONTANA STATE PRISON
A/E 25-12-02
DEER LODGE, MONTANA

DETAILS - SECURITY

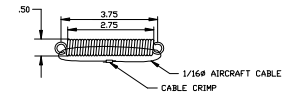
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JOB NO:
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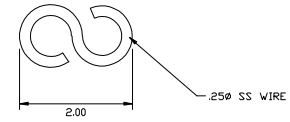
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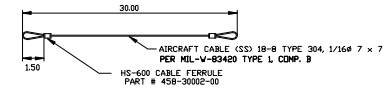
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SPRING ASSEMBLY
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S HOOK
416-30485-00



AIRCRAFT CABLE
553-30816-01



TENSIONER
416-21570-00

ARCHITECTS A.I.A.
JOHN W. PETERSON
MICHAEL A. BECKSON
FRANKLIN D. STOKES
GLEN D. ANKOKER
**Architects
Design
Group PC**
No. 1 SUNSET PLAZA • KALISPELL, MONTANA • 406-257-7125

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A/B 25-12-02
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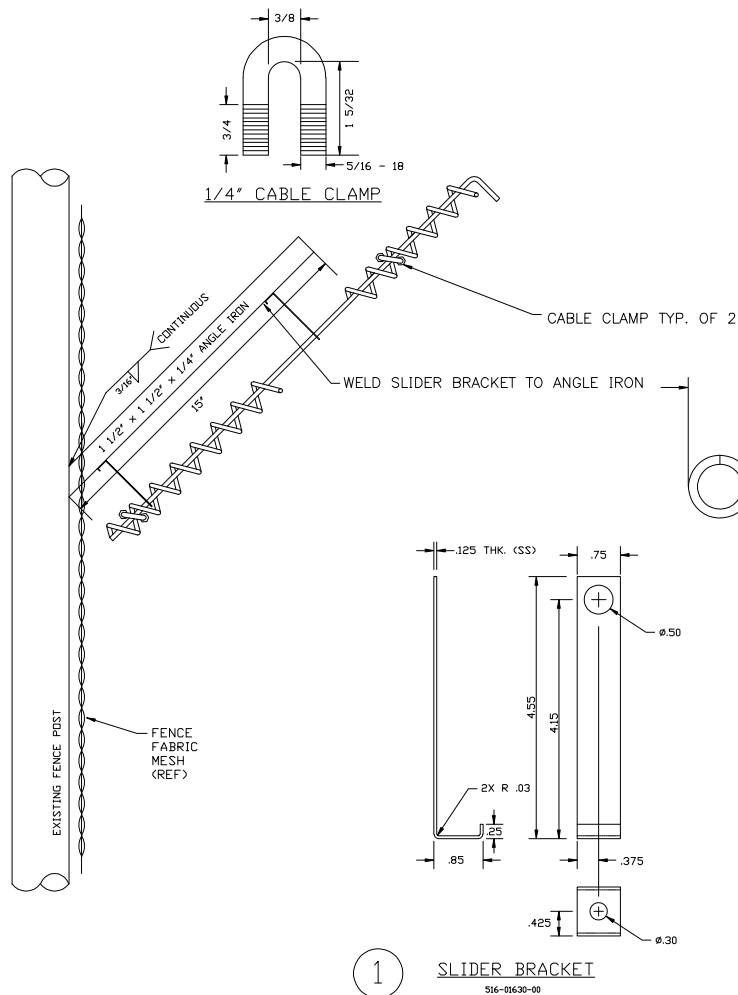
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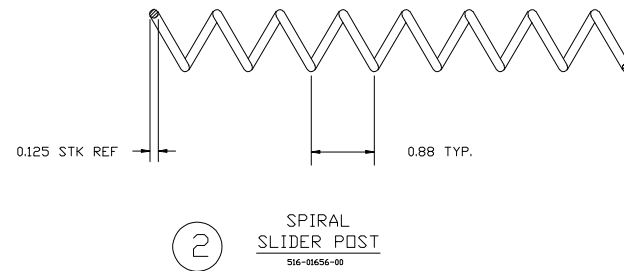
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NOTES: (UNLESS OTHERWISE SPECIFIED)
1. MATERIAL: STAINLESS STEEL 302, 304, 306, 316, 1/4\"/>

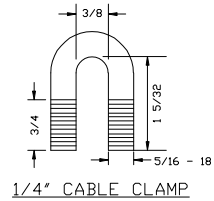


NOTES: (UNLESS OTHERWISE SPECIFIED)
1. MATERIAL: #.125 STAINLESS STEEL



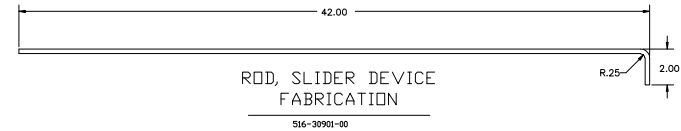
NOTES: (UNLESS OTHERWISE SPECIFIED)

- 1 THE JOINT AREAS OF ALL PARTS TO BE WELDED SHALL BE CLEANED OF CONTAMINANTS AND OTHER MATERIALS WHICH MAY BE DETRIMENTAL TO OBTAINING SATISFACTORY WELDS. FUSION, PENETRATION SHALL BE SUFFICIENT TO MEET DRAWING REQUIREMENTS. WELD SHALL BE FREE OF HARMFUL DEFECTS SUCH AS CRACKS, POROSITY, UNDERCUTS, VOIDS, AND GAPS. FILLETS SHALL BE UNIFORM AND SMOOTH
- 2 FINISH: HOT DIP GALVANIZE.



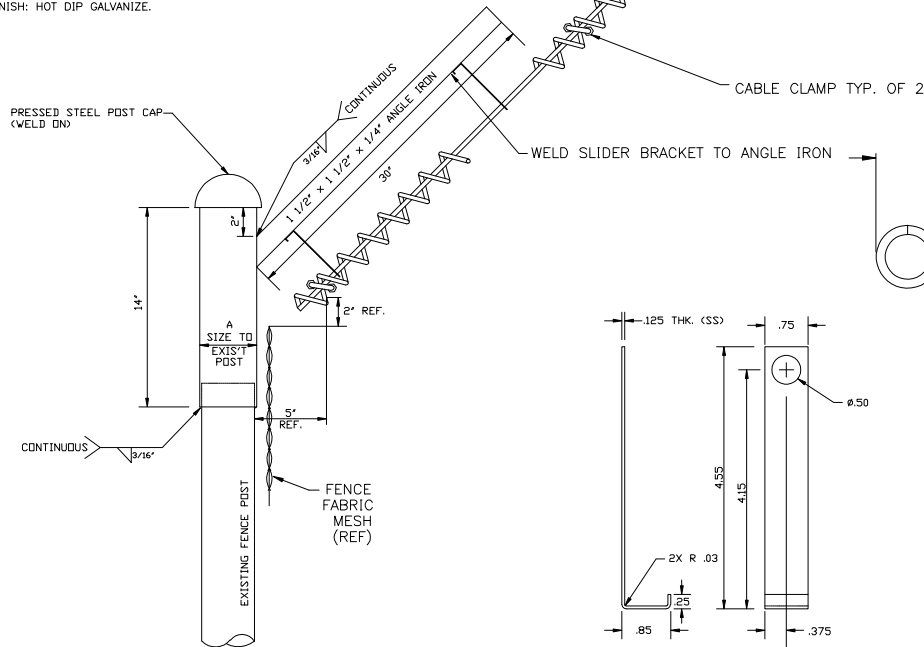
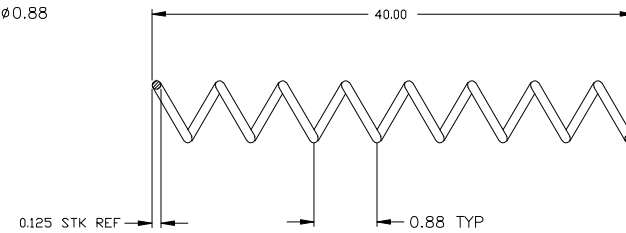
NOTES: (UNLESS OTHERWISE SPECIFIED)

1. MATERIAL: STAINLESS STEEL 302, 304, 306, 316, 1/4\"/>

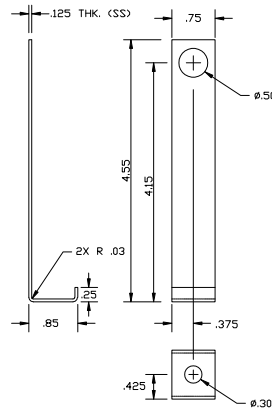


NOTES: (UNLESS OTHERWISE SPECIFIED)

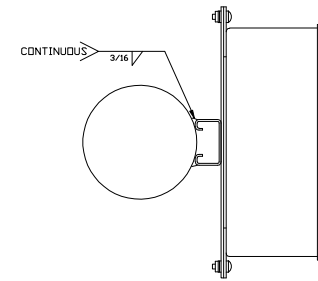
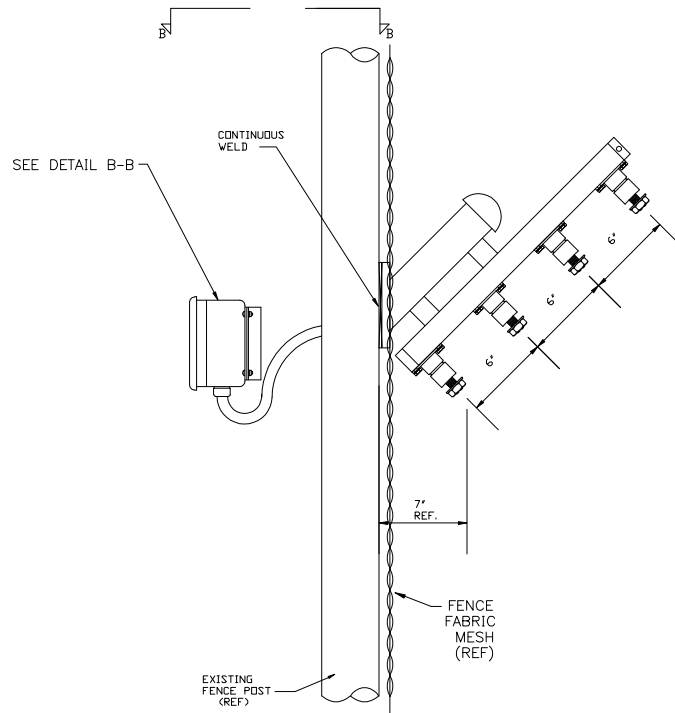
1. MATERIAL: ϕ .125 STAINLESS STEEL



SLIDER POST
BRACKET
553-30895-01



SLIDER BRACKET
516-01630-00



NOTE: PROCESSOR ENCLOSURE TO BE ATTACHED TO EXISTING FENCE POST AT 3' FROM GROUND LEVEL

DETAIL B-B

